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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,721	06/24/2003	Takashi Imai	59,439 (70904)	3344
21874	7590	04/12/2007	EXAMINER	
EDWARDS ANGELL PALMER & DODGE LLP P.O. BOX 55874 BOSTON, MA 02205			BECKER, SHASHI KAMALA	
			ART UNIT	PAPER NUMBER
			2179	
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MONTHS	04/12/2007	PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/603,721	IMAI ET AL.
	Examiner	Art Unit
	Shashi K. Becker	2179

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 29 January 2007.
- 2a) This action is **FINAL**.                                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-18 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 24 June 2003 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_.

## DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-4, 6, 7, 9, 11, 12, and 16-18 rejected under 35 U.S.C. 103(a) as being unpatentable over Mizuno et al (hereinafter Mizuno), US 2002/0041390, in view of Hirayama, US Patent 5267327.

- In regards to claims 1, 16 and 17, Mizuno teaches a user interfacing display apparatus for use in an electronic apparatus including (i) detail setting key for detecting what a user selects, and for performing detail setting of a job as to what a user selects, and (Figure 6A-F) (ii) control means, capable of

performing a plurality of jobs respectively in accordance with desired detail settings, for suspending a job that is being processed or a job that is standing by and performing another job, in accordance with an interruption instruction, the user interfacing display apparatus comprising (page 5 paragraphs [0066] and [0067]):

an interruption key for detecting the interruption instruction, and transmitting the interruption instruction to the control means (page 5 paragraph [0067]),

a display section for displaying the desired detail settings (Figure 6A-F); and

display control means for (iii) popping up, on the display section, a detail item of that one of the detail settings which is selected, when the detail setting key that is associated with the detail setting is selected (page 5 paragraph [0070]).

However, Mizuno fails to specifically teach the interruption key being capable of changing a display state thereof.

Hirayama teaches an apparatus and method for registering the handwriting of a user so it can be translated into block characters. Hirayama further teaches the interruption key being capable of changing a display state thereof (column 10 lines 56-59, and Figure 5C). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the apparatus and method of Mizuno to include the interruption key being capable of changing a display state

thereof, of Hirayama, in order to visually view when the interrupt key is enabled/disabled. One would have been motivated to make such a combination in order to alert the user of the enablement or disablement of the interrupt key.

- In regards to claim 2, Mizuno teaches the above limitations, but fails to specifically teach wherein, on performing the popping-up on the display section, the display control means transmits to the control means an instruction to invalidate the interruption instruction detected via the interruption key.

Hirayama teaches an apparatus and method for registering the handwriting of a user so it can be translated into block characters. Hirayama further teaches wherein, on performing the popping-up on the display section, the display control means transmits to the control means an instruction to invalidate the interruption instruction detected via the interruption key (column 10 lines 39-59). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the apparatus and method of Mizuno for the same reasons stated previously (see claim 1 *supra*).

- In regards to claim 3, Mizuno teaches the above limitations (see claim 1 *supra*), but fails to specifically teach wherein on ending the popping-up after the detail setting is completed, the display control means transmits to the control means an instruction to validate the interruption instruction detected via the interruption key.

Hirayama teaches an apparatus and method for registering the handwriting of a user so it can be translated into block characters. Hirayama further teaches

wherein on ending the popping-up after the detail setting is completed; the display control means transmits to the control means an instruction to validate the interruption instruction detected via the interruption key (column 9 lines 29-49). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the apparatus and method of Mizuno for the same reasons stated previously (see claim 1 *supra*).

- In regards to claim 4, Mizuno teaches the above limitations (see claim 1 *supra*), but fails to specifically teach the interruption key is a soft key that is displayed on the display section.

Hirayama teaches an apparatus and method for registering the handwriting of a user so it can be translated into block characters. Hirayama further teaches the interruption key is a soft key that is displayed on the display section (Figure 5C). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the apparatus and method of Mizuno in order to make the interrupt key a soft key. One would have been motivated to make such a combination in order to reduce the physical key layout into a touch screen.

- In regards to claim 6, Mizuno teaches the above limitations (see claim 1 *supra*), but fails to specifically teach wherein on performing the popping-up on the display section, the display control means hides at least part of the interruption key by performing the popping-up.

Hirayama teaches an apparatus and method for registering the handwriting of a user so it can be translated into block characters. Hirayama further teaches

wherein on performing the popping-up on the display section, the display control means hides at least part of the interruption key by performing the popping-up (Figure 5F). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the apparatus and method of Mizuno in order to hide the interrupt key when the display pops up. One would have been motivated to make such a combination in order to reduce the screen layout of the touch screen.

- In regards to claim 7, Mizuno teaches the above limitations (see claim 1 *supra*), and further teaches wherein the interruption key is a hard key provided in the display section (page 5 paragraph [0067]).
- In regards to claim 9, Mizuno teaches the above limitations (see claim 1 *supra*), but fails to specifically teach wherein on performing the popping-up on the display section, the display control means changes the display state of the interruption key to an unavailability display state informing that interruption is unavailable.

Hirayama teaches an apparatus and method for registering the handwriting of a user so it can be translated into block characters. Hirayama further teaches wherein on performing the popping-up on the display section, the display control means changes the display state of the interruption key to an unavailability display state informing that interruption is unavailable (column 10 lines 39-59). It would have been obvious to one of ordinary skill in the art, at the time of the

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invention, to modify the apparatus and method of Mizuno for the same reasons stated previously (see claim 1 *supra*).

- In regards to claim 11, Mizuno teaches the above limitations (see claim 1 *supra*), but fails to specifically teach wherein, the changing of the display state of the interruption key to the unavailability display state is performed by using a dotted line.

Hirayama teaches an apparatus and method for registering the handwriting of a user so it can be translated into block characters. Hirayama further teaches wherein, the changing of the display state of the interruption key to the unavailability display state is performed by using a dotted line (Figure 5C). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the apparatus and method of Mizuno for the same reasons stated previously (see claim 1 *supra*).

- In regards to claim 12, Mizuno teaches the above limitations (see claim 1 *supra*), but fails to specifically teach wherein, on ending the popping-up after the detail setting is completed, the display control means changes back the display state of the interruption key to a display state displayed before the popping-up is performed.

Hirayama teaches an apparatus and method for registering the handwriting of a user so it can be translated into block characters. Hirayama further teaches wherein, on ending the popping-up after the detail setting is completed, the display control means changes back the display state of the interruption key to a

display state displayed before the popping-up is performed (column 10 lines 39-59). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the apparatus and method of Mizuno for the same reasons stated previously (see claim 1 *supra*).

- In regards to claim 18, Mizuno teaches the above limitations (see claim 1 *supra*), and further teaches the image forming apparatus being a digital photocopying machine (Abstract).

4. Claims 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizuno and Hirayama as applied to claims 1-4, 6, 7, 9, 11, 12, and 16-18 above, and further in view of Hirayama US 2002/0050996.

- In regards to claim 5, Mizuno and Hirayama teach the above limitations (see claims 1-4, 6, 7, 9, 11, 12, and 16-18 *supra*). However, they fail to specifically teach wherein, on performing the popping-up on the display section, the display control means erases display of the interruption key.

Hirayama teaches an information processing apparatus. Hirayama further teaches wherein, on performing the popping-up on the display section, the display control means erases display of the interruption key (page 4 paragraph [0049]). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the apparatus and method of Mizuno and Hirayama to include wherein, on performing the popping-up on the display section, the display control means erases display of the interruption key in order to erase the interruption key display. One would have been motivated to make such a

combination in order to reduce the layout screen of the touch panel when keys are not needed.

- In regards to claim 10, Mizuno and Hirayama teach the above limitations (see claims 1-4, 6, 7, 9, 11, 12, and 16-18 *supra*). However, they fail to specifically teach wherein the changing of the display state of the interruption key to the unavailability display state is performed by lighting a color thickness of the interruption key from a predetermined color thickness in which the interruption key has been displayed.

Hirayama teaches an information processing apparatus. Hirayama further teaches wherein, the changing of the display state of the interruption key to the unavailability display state is performed by lighting a color thickness of the interruption key from a predetermined color thickness in which the interruption key has been displayed (page 3 paragraph [0039]). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the apparatus and method of Mizuno and Hirayama to include the changing of the display state of the interruption key to the unavailability display state is performed by lighting a color thickness of the interruption key from a predetermined color thickness in which the interruption key has been displayed, in order to change the display state of the interruption key. One would have been motivated to make such a combination in order to better alert the user of the enablement or disablement of the interrupt key.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mizuno and Hirayama as applied to claims 1-4, 6, 7, 9, 11, 12, and 16-18 above, and further in view of Kato et al (hereinafter Kato), US Patent 5978619.

Mizuno and Hirayama teach the above limitations (see claims 1-4, 6, 7, 9, 11, 12, and 16-18 *supra*). However, they fail to specifically teach wherein, on performing the popping-up on the display section, the display control means switches over a lamp indicating whether the interruption key is available or unavailable.

Kato teaches an image forming apparatus employing a plurality of user identification codes. Kato further teaches wherein, on performing the popping-up on the display section, the display control means switches over a lamp indicating whether the interruption key is available or unavailable (column 4 lines 17-28). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the apparatus and method of Mizuno and Hirayama to include, wherein, on performing the popping-up on the display section, the display control means switches over a lamp indicating whether the interruption key is available or unavailable in order to indicate the status of the interruption key. One would have been motivated to make such a combination in order to better alert the user of the enablement or disablement of the interrupt key.

6. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over, Mizuno and Hirayama as applied to claims 1-4, 6, 7, 9, 11, 12, and 16-18 above and further in view of Nishimura et al (hereinafter Nishimura), US Patent 6038040.

- In regards to claim 13, Mizuno and Hirayama teach the above limitations (see claims 1-4, 6, 7, 9, 11, 12, and 16-18 *supra*). However, they fail to specifically teach a warning means for warning the user, so that the display control means warns the user by using the warning means when detecting that the interruption key is selected while the popping-up is being performed on the display section.

Nishimura teaches an image forming apparatus with improved operability. Nishimura further teaches a warning means for warning the user, so that the display control means warns the user by using the warning means when detecting that the interruption key is selected while the popping-up is being performed on the display section (column 7 line 64-column 8 line 3). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the apparatus and method of Mizuno and Hirayama to include, a warning means for warning the user, so that the display control means warns the user by using the warning means when detecting that the interruption key is selected while the popping-up is being performed on the display section in order to indicate the status of the interruption key. One would have been motivated to make such a combination in order to better alert the user of the enablement or disablement of the interrupt key.

- In regards to claim 14, Mizuno and Hirayama teach the above limitations (see claims 1-4, 6, 7, 9, 11, 12, and 16-18 *supra*). However, they fail to specifically teach the warning is performed by using a warning message.

Nishimura teaches an image forming apparatus with improved operability.

Nishimura further teaches the warning is performed by using a warning message (column 7 line 64-column 8 line 3). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the apparatus and method of Mizuno and Hirayama to include, a warning means by a warning message in order to indicate the status of the interruption key. One would have been motivated to make such a combination in order to better alert the user of the enablement or disablement of the interrupt key.

7. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over, Mizuno, Hirayama, and Nishimura as applied to claims 1-14, and 16-18 above and further in view of Sadakuni, US 6385412.

Mizuno, Hirayama, and Nishimura teach the above limitations (see claims 1-14, and 16-18 *supra*). However, they fail to specifically teach wherein, the warning is performed by using a warning sound.

Sadakuni teaches and image forming apparatus. Sadakuni further teaches wherein, the warning is performed by using a warning sound (column 8 lines 19-25). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the apparatus and method of Mizuno, Hirayama and Nishimura to include, a warning means by a warning sound in order to indicate the status of the interruption key. One would have been motivated to make such a combination in order to better alert the user of the enablement or disablement of the interrupt key.

***Response to Arguments***

Applicant's arguments filed 1/29/07 have been fully considered but they are not persuasive.

**Applicant argues:** "Neither of these principal references addresses the fundamental problem solved by the present invention -- avoiding confusion of the operator when one operation is interrupted temporarily to run a second operation with a different associated display. "

**Examiner disagrees:** The method of "interruption temporarily to run a second operation with a different associated display" is not clearly recited in independent claim 1. Therefore, Mizuno and Hirayama meet the claimed limitations.

**Applicant argues:** "Applicants do not find in these references any motivation or suggestion to use the Hirayama change of state in its interrupt key in the context of the Mizuno apparatus. "

**Examiner disagrees:** In response to applicant's argument that Hirayama and Mizuno are nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Hirayama and Mizuno may not be in the same field of art, but are reasonably pertinent to the particular problem with which the

applicant was concerned; the interrupt function. Therefore, there is motivation for the combination of Hirayama and Mizuno, which meets the claimed limitations.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hayakawa teaches an interrupt button visually displayed by a blinking lamp (column 6 lines 58-67). Takano teaches an interrupt key with a blinking display (column 9 lines 3-23). Ikegami teaches a flashing interrupt key (column 9 lines 34-43). Fujii teaches a blinking interrupt key (column 8 lines 50-60). Kurashina teaches a flashing interrupt key (column 11 lines 40-61). Matsumoto teaches a lighted interrupt key (column 10 lines 49-67).

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shashi K. Becker whose telephone number is 571-272-8919. The examiner can normally be reached on Mon-Fri 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Weilun Lo can be reached on 571-272-4847. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SKB

BAHUVNA  
PRIMARY EXAMINER